

### CLAIMS

1. An isolated ligand-binding domain of an Eph family RTK.
2. An isolated ligand-binding domain according to Claim 1, wherein the Eph-family RTK is an EphA3 RTK.
3. An isolated ligand-binding domain according to Claim 2, wherein the EphA3 RTK is HEK.
4. An isolated ligand-binding domain according to Claim 1, which domain is capable of binding LERK7.
5. An isolated ligand-binding domain of an Eph-family RTK which has at least one disulphide bond involving cysteine residues corresponding to conserved cysteine residues in HEK, which disulphide-bonded cysteines are selected from the group consisting of:-
  - (i) Cys<sub>71</sub>-Cys<sub>189</sub>;
  - (ii) Cys<sub>257</sub>-Cys<sub>270</sub>;
  - (iii) Cys<sub>259</sub>-Cys<sub>270</sub>;
  - (iv) Cys<sub>306</sub>-Cys<sub>322</sub>; and
  - (v) Cys<sub>362</sub>-Cys<sub>365</sub>.
6. An isolated ligand-binding domain of an Eph-family RTK which comprises an amino acid sequence encoded by exon III of a gene encoding the Eph-family RTK.
7. An isolated ligand-binding domain according to Claim 6, wherein exon III has a nucleotide sequence according to SEQ ID NO:8.
8. An isolated ligand-binding domain according to Claim 6, wherein the ligand-binding domain further comprises an amino acid sequence encoded by exon II of said gene.
9. An isolated ligand-binding domain according to Claim 8, wherein exon II has a nucleotide sequence according to SEQ ID NO:7.
10. An isolated ligand-binding domain according to Claim 6 or Claim 8, wherein the ligand-binding domain further comprises an amino acid sequence encoded by exon I of said gene.
11. An isolated ligand-binding domain according to Claim 10,

wherein exon I has a nucleotide sequence according to SEQ ID NO:6.

12. An isolated ligand-binding domain of an Eph-family RTK which comprises an amino acid sequence encoded by a nucleotide sequence according to SEQ ID NO:5.

13. An isolated ligand-binding domain of an Eph-family RTK which comprises an amino acid sequence according to SEQ ID NO:1.

14. An isolated ligand-binding domain according to Claim 13, which further comprises an amino acid sequence according to SEQ ID NO:2.

15. An isolated ligand-binding domain according to Claim 13 or Claim 14, which further comprises an amino acid sequence according to SEQ ID NO:3.

16. An isolated recombinant Eph-family RTK ligand-binding domain which consists of the amino acid sequence of SEQ ID NO:4.

17. A peptide which corresponds to a sub-sequence of a ligand-binding domain of an Eph-family RTK.

18. An isolated polypeptide homolog of a ligand-binding domain of an Eph family RTK.